DEG 500-D/ DEG 600-D/-P

Operating instructions en
Mode d'emploi fr
Manual de instrucciones es

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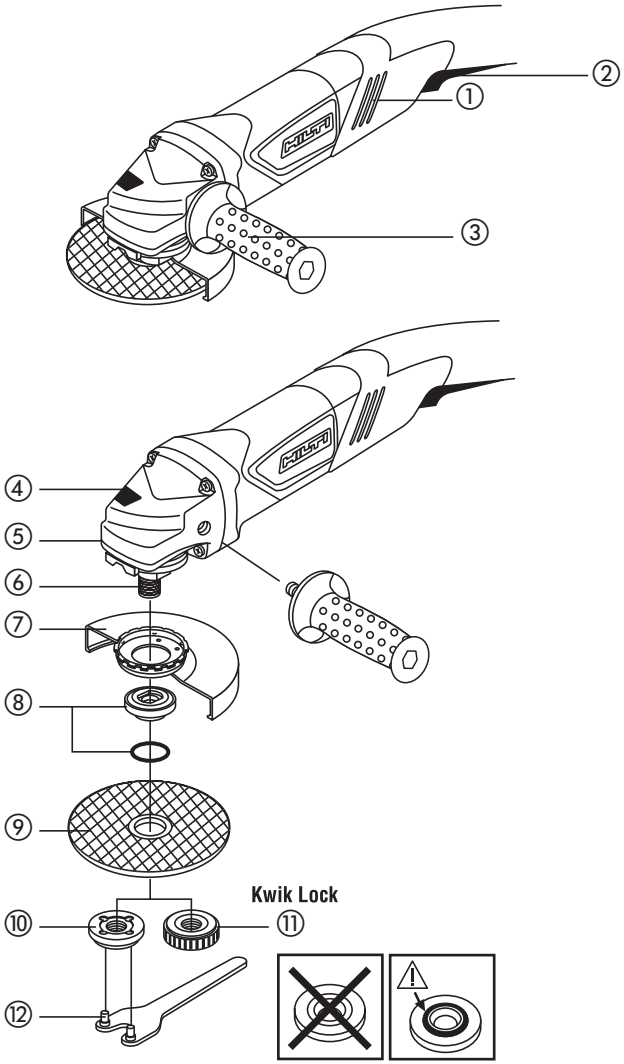

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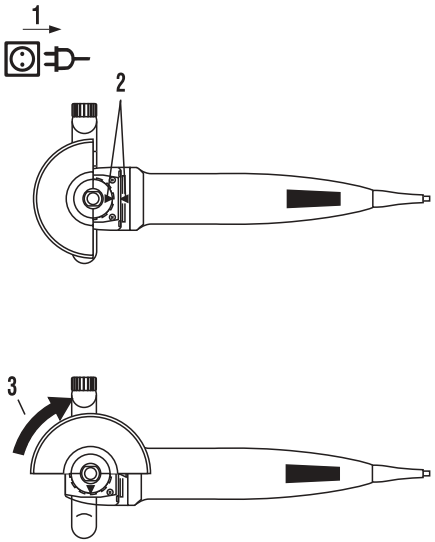

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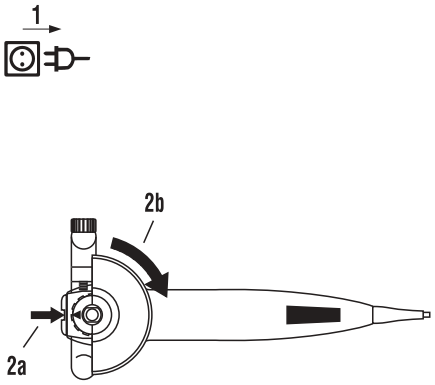

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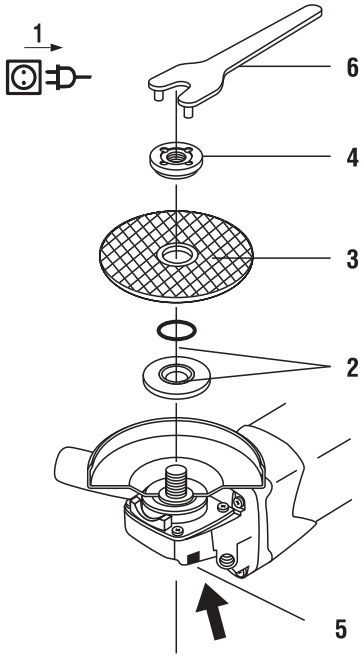

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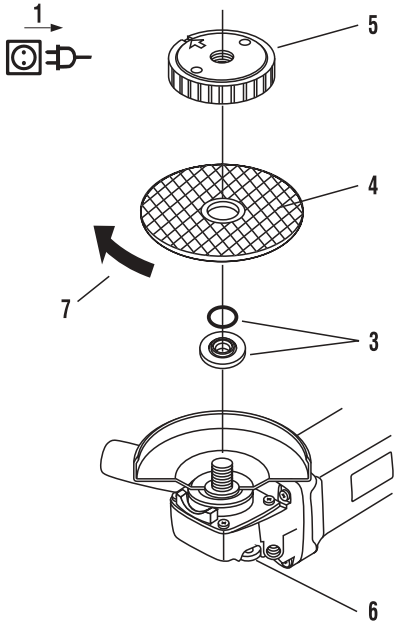

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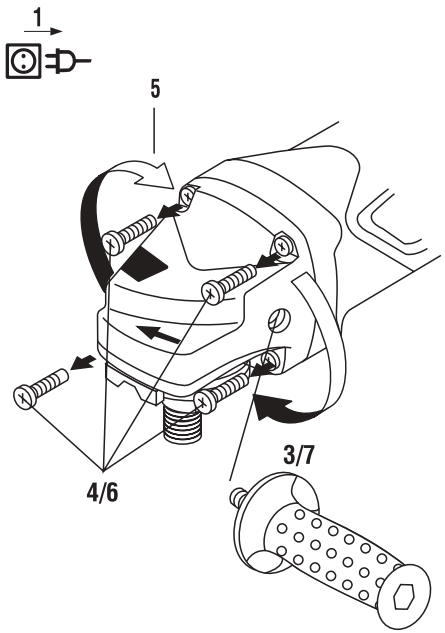

DEG 500-D/DEG 600-D/-P angle grinder

It is essential that the operating instructions are read before the tool is operated for the first time.

Always keep these operating instructions together with the tool.

Ensure that the operating instructions are with the tool when it is given to other persons.

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Operating controls and components O

① Ventilation slots
② On / off switch (hold to run)
③ Vibration-absorbing side handle
④ Spindle lockbutton
⑤ Disc guard release button
⑥ Drive spindle
⑦ Disc guard
⑧ Clamping flange with O-ring
⑨ Cutting disc / grinding disc
⑩ Clamping nut
⑪ Kwik-Lock quick-release clamping nut
⑫ Pin wrench

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1. General information

1.1 Safety notices and their meaning

DANGER
Draws attention to imminent danger that could lead to serious bodily injury or fatality.

WARNING
Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

CAUTION
Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

NOTE
Draws attention to instructions and other useful information.

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1.2 Explanation of the pictograms and other information

Warning signs

General warning

Warning: electricity

Obligation signs

Wear eye protection.

Wear a hard hat.

Wear ear protection.

Wear protective gloves.

Wear breathing protection.

Symbols

Read the operating instructions before use.

Return waste material for recycling.

Double insulated

1 These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions.

In these operating instructions the designation “the tool” always refers to the DEG 500 or DEG 600 angle grinder.

Location of identification data on the tool

The type designation, serial number and technical status of the tool can be found on the type plate. The serial no. can be found on the left side of the motor housing. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type:

Serial no.:

2. Description

2.1 Use of the product as directed

The tool is designed for cutting, grinding and brushing metal or mineral materials (concrete, stone, etc.) without use of water. Use of a guide carriage is mandatory for cutting stone.

The working environment may be as follows: construction site, workshop, renovation, conversion or new construction.

The power tool may be operated only when connected to a power supply providing a voltage and frequency in compliance with the information given on its type plate.

Working with metals: Cutting, rough grinding, fine grinding, brushing

Working with mineral materials: Cutting and slitting using the corresponding dust removal hood (DC EX), grinding using the corresponding dust removal hood (DG EX).

Use only grinding discs, cutting discs, cup wheels etc. that are approved for use at a speed of at least 11000 r.p.m. (125 mm / 5" dia.) or at least 9300 r.p.m. (150 mm / 6" dia.).

Use only synthetic resin-bonded, fiber-reinforced grinding or cutting discs or diamond cutting discs approved for use at a peripheral speed of 80 m/sec.
The tool may be used only for dry cutting or grinding.
Cutting or grinding materials containing asbestos is not permissible.
When grinding stone, a vacuum cleaner equipped with a stone dust filter, e.g. the Hilti VCU 40 / VCD 50 vacuum cleaner, must be used.
Changes or modifications to the tool are not permissible.
To avoid the risk of injury, use only genuine Hilti accessories and insert tools.
Observe the information printed in the operating instructions concerning operation, care and maintenance.
The tool is designed for professional use and may be operated, serviced and maintained by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

2.2 The items supplied in the cardboard box are:

1 Tool with dust removal hood
1 Vibration-absorbing side handle
1 Kwik-Lock quick-release clamping nut
1 Flange
1 Nut
1 Pin wrench
1 Operating instructions
1 Cardboard box
1 Protective glasses

2.3 Starting current limitation

The electronic starting current limiter reduces the starting current drawn by the tool and thus prevents the mains fuse blowing. It also allows the tool to start smoothly, without a jolt.

2.4 Constant-speed electronics

Electronic speed control keeps running speed almost constant irrespective of whether the tool is idling or running under load. Constant running speed helps ensure maximum efficiency.

2.5 ATC (Active Torque Control)

The electronics in the tool detect situations where there is a risk of the disc sticking and prevent further rotation of the drive spindle by switching the tool off (does not prevent kickback). The switch must be released and pressed again to restart the tool.

2.6 Restart interlock

The tool does not restart by itself when the switch is locked in the "on" position and the power returns after an interruption in the electric supply. The switch must first be released and then pressed again to restart.

2.7 Temperature-dependent motor protection

The temperature-dependent motor protection system prevents the tool overheating by monitoring current input and motor temperature.
In the event of motor overload due to application of excessive pressure to the disc, performance will drop noticeably or the tool may stop running (avoid stalling the tool in this way).
Permissible tool overload cannot be given as a specific value as it depends on the temperature of the motor .

In the event of the tool being overloaded, release the pressure applied and allow the tool to run under no load for approx. 30 seconds.

2.8 Using extension cords

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Use only extension cords of a type approved for the application and with conductors of adequate cross section. The tool may otherwise loose performance and the extension cord may overheat. Check the extension cord for damage at regular intervals. Replace damaged extension cords.

Recommended minimum conductor cross section and max. cable lengths

Conductor cross section	1.5 mm²	2.0 mm²	2.5 mm²	3.5 mm²	14 AWG	12 AWG
Mains voltage 100V		30 m		50 m		
Mains voltage 110-120V	20 m	30 m	40 m	50 m	75 ft	125 ft
Mains voltage 220-240V	50 m		100 m			

Do not use extension cords with 1.25 mm² or 16 AWG conductor cross sections.

2.9 Using extension cords outdoors

When working outdoors, use only extension cords that are approved and correspondingly marked for this application.

2.10 Using a generator or transformer

This tool may be powered by a generator or transformer when the following conditions are fulfilled: The unit must provide AC voltage and a power output in watts of at least twice the value printed on the rating plate on the electric tool. The operating voltage must remain within +5% and -15% of the rated voltage at all times, frequency must be in the 50 – 60 Hz range and never above 65 Hz, and the unit must be equipped with automatic voltage regulation and starting boost.
Never operate other tools or appliances from the generator or transformer at the same time. Switching other tools or appliances on and off may cause undervoltage and / or overvoltage peaks, resulting in damage to the tool.

2.11 Using the Kwik-Lock clamping nut with grinding / cutting discs

The Kwik-Lock nut may be used instead of the standard clamping nut. No tools are then required for changing cutting discs.

NOTE
The Kwik-Lock nut cannot be used with cup wheels, brushes, rubber backing pads, tuck pointing discs (special discs used for joint repair) or with diamond cup wheels.

2.12 DG EX 125 dust removal hood for grinding

The tool is suitable only for occasional use with diamond cup wheels for grinding mineral materials.
The tool may be used for this application only together with the corresponding DG EX 125 dust removal hood and VCU 40 / VCD 50 vacuum cleaner.

2.13 Disc guard consisting of guide carriage and DC EX 125 dust removal hood (for cutting and slitting)

A guide carriage should be used for cutting work.

2.14 DC EX 125-C compact dust removal hood

It is recommended that a dust removal hood and a suitable Hilti vacuum cleaner are used for all cutting and slitting work on concrete or stone. These serve to protect the operator and increase the life of the tool and disc used.

3. Insert tools, accessories

125 mm / 5" diameter discs for max. 11000 r.p.m. and a max. peripheral speed of 80 m/sec

Abrasive cutting disc	AC-D Universal Premium
Abrasive cutting disc	AC-D Universal Super Premium
Abrasive cutting disc	AC-D INOX
Abrasive grinding disc	AG-D Universal Premium
Abrasive grinding disc	AG-D Universal Super Premium
Abrasive grinding disc	AF-D abrasive flap disc
Diamond cutting discs	DC-D 125
Diamond grinding disc	DG-CW 125

150 mm / 6" diameter discs for max. 9300 r.p.m. and a max. peripheral speed of 80 m/sec

Abrasive cutting disc	AC-D Universal Super Premium
Abrasive grinding disc	AG-D Universal Super Premium
Diamond cutting discs	DC-D 150

Items not supplied by Hilti

Wire brushes	
Rubber backing pads	

Accessories for the DEG 500 and DEG 600

Kwik-Lock quick-release clamping nut	
Dust removal hood for grinding	DG-EX 125/5"
Dust removal hood with carriage for cutting	DC-EX 125/5"
Toolbox	
Vacuum cleaner	

Accessories for the DEG 500

Compact dust removal hood	DC-EX 125/5" C

4. Technical data

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Tool	DEG 500-D	DEG 600-D/-P
Rated voltage / rated current / power input	120V / 11.5A / 1200W	120V / 11.5A / 1200W
Rated frequency	60 Hz	60 Hz
Rated speed under no load	11,000 r.p.m.	9,300 r.p.m.
Cutting disc	125 mm / 5" diameter	150 mm / 6" diameter
Dimensions (L x H x W) without hood	360 x 103 x 80 mm	360 x 103 x 80 mm
Weight (without accessories)	1.9 kg	1.9 kg

Other information about the tool

Drive spindle thread (arbor size)	5/8"
Protection class	Protection class II (double insulated)

5. Safety rules

5.1 General safety rules

WARNING! Read all instructions! Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “power tool” in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool. SAVE THESE INSTRUCTIONS.

5.1.1 Work area

a) **Keep work area clean and well lit** . Cluttered and dark areas invite accidents.
b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite dust or fumes.
c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

5.1.2 Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

5.1.3 Personal safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
c) **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying power tools with your finger on the switch or

plugging in power tools that have the switch on invites accidents.

d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

5.1.4 Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) **Disconnect the plug from the power source and / or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5.1.5 Service

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

5.2 Additional safety precautions

5.2.1 Personal safety

a) **Wear ear protectors.** Exposure to noise can cause hearing loss.

b) **Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.

c) **Always hold the tool securely with both hands on the grips provided.** Keep the grips dry, clean and free from oil and grease.

d) **Breathing protection must be worn if the tool is used without a dust extraction system for work that creates dust.**

e) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**

f) **Avoid touching rotating parts. Switch the tool on only after bringing it into position at the workpiece.** Touching rotating parts, especially rotating drill bits, discs or blades, etc. may lead to injury.

g) **Always lead the supply cord and extension cord away from the tool to the rear while working.** This helps to avoid tripping over the cord while working.

5.2.2 Power tool use and care

a) **Check that the speed rating printed on the grinding disc is equal to or higher than the rated speed of the tool.**

b) **Check to ensure that the dimensions of the cutting/grinding disc are suitable for the tool.**

c) **Grinding discs must be stored and handled carefully in accordance with the manufacturer's instructions.**

d) **Check the condition of the grinding disc before using it. Do not use discs that are broken, cracked or damaged in any way.**

e) **Check that the grinding disc is fitted in accordance with the manufacturer's instructions.**

f) **If use of a spacer ring or other intermediate part is specified and the part is supplied with the**

grinding disc, check to ensure that the part is fitted.

g) **Before use, check that the cutting or grinding disc has been fitted correctly, the clamping nut tightened, and then allow the tool to run for 30 seconds under no load while holding the tool securely. Switch off the tool immediately if significant vibration or any other faults are noticed. Should this occur, examine the tool in order to determine the cause.**

h) **Never use the tool without the disc guard.**

i) **Do not use separate reducing rings or adapters to enable use of grinding discs with a larger mounting hole.**

j) **If the grinding disc (or cup wheel, etc.) is equipped with a threaded insert, check that the threaded section is long enough to take up the length of the drive spindle.**

k) **The workpiece must be fixed securely in place.**

l) **Do not use cutting discs for grinding.**

m) **Take steps to ensure that flying sparks from the tool do not present a hazard, i.e. by striking yourself or other persons or by igniting inflammable substances. Adjust the position of the disc guard accordingly.**

n) **When working in dusty conditions, check to ensure that the cooling air openings remain unobstructed. Should it become necessary to remove dust deposits from the air openings, first unplug the tool from the electric supply and then use a non-metalic object to remove the dust, taking care to avoid damaging parts inside the tool.**

o) **The disc continues to rotate after the tool has been switched off. Wait until the disc stops rotating.**

5.2.3 Electrical safety

a) **Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present.** External metal parts of the tool may become live, for example, when an electric cable is drilled into accidentally. This presents a serious risk of electric shock.

b) **Check the condition of the supply cord and its plug connections and have it replaced by a qualified electrician if damage is found. Check the condition of the extension cord and replace it if damage is found. Do not touch the supply cord in the event of it suffering damage while working. Disconnect the supply cord plug from the power outlet.** Damaged supply cords or extension cords present a risk of electric shock.

c) **Dirty or dusty tools which have been used frequently for work on conductive materials should be checked at regular intervals at a Hilti Service Center.** Under unfavorable circumstances, dampness or dust adhering to the surface of the tool, especially dust from conductive materials, may present a risk of electric shock.

d) **When working outdoors with an electric tool check to ensure that the tool is connected to the electric supply by way of a ground fault circuit breaker (RCD) with a rating of max. 30 mA (tripping current).** Use of a ground fault circuit breaker reduces the risk of electric shock.

e) **Use of a ground fault circuit breaker (RCD) with a maximum trip current of 30 mA is recommended.**

5.2.4 Workplace

a) **Ensure that the workplace is well lit.**

b) **Ensure that the workplace is well ventilated.** Exposure to dust at a poorly ventilated workplace may result in damage to the health.

5.2.5 Personal protective equipment

a) **The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves and breathing protection while the tool is in use.**

6. Before use

CAUTION
Never use the tool without the disc guard.

6.1 Fitting the side handle

CAUTION
The side handle must be fitted for all types of work.

The side handle may be screwed onto the tool on the right or left.

6.2 Working with the tool

Take care to ensure that the closed side of the guard is always positioned toward the operator's body.
Adjust the position of the guard to suit the requirements of the work being done.
Close the disc guard adjustment locking lever before operating the tool.

6.2.1 Fitting the disc guard O

NOTE
The disc guard is equipped with locating lugs that ensure only disc guards of a type suitable for use with the tool can be fitted. The locating lugs of the disc guard fit into the guide groove in the collar around the drive spindle. The tool features a bayonet-type quick-release clamping mechanism for the disc guard.

1. Disconnect the supply cord plug from the power outlet.
2. Fit the disc guard onto the drive spindle collar with the two triangular marks on the disc guard and on the tool in alignment.
3. Press the disc guard onto the drive spindle collar against the spring pressure and then rotate it until it engages.

6.2.2 Adjusting the disc guard O

1. Disconnect the supply cord plug from the power outlet.
2. Press the release button and then rotate the disc guard into the desired position.

6.2.3 Removing the disc guard

1. Disconnect the supply cord plug from the power outlet.
2. Press the release button and then rotate the disc guard until the two triangular marks on the guard and on the tool are in alignment.
3. Lift off the guard.

6.3 Fitting the cutting / grinding disc O

DANGER
Check that the speed rating printed on the grinding disc is equal to or higher than the rated speed of the tool.

DANGER
Check the condition of the grinding disc before using it. Do not use discs that are broken, cracked or damaged in any way.

1. Unplug the supply cord form the power source.
2. **CAUTION** The clamping flange is equipped with an O-ring. The O-ring must be replaced if missing or damaged.
   Fit the clamping flange onto the drive spindle.
3. Fit the diamond disc, cutting disc or grinding disc.
4. Screw on the clamping nut and tighten it.
5. **CAUTION** Do not press the spindle lockbutton before the drive spindle has stopped rotating.
   Press the spindle lockbutton and hold it in this position.
6. Use the pin wrench to tighten the clamping nut securely and then release the spindle lockbutton.

6.4 Using the Kwik-Lock clamping nut with grinding / cutting discs

NOTE
The Kwik-Lock nut may be used instead of the standard clamping nut. No tools are then required for changing grinding / cutting discs.

NOTE
The Kwik-Lock nut cannot be used with cup wheels, brushes, rubber backing pads, tuck pointing discs (special discs used for joint repair) or with diamond cup wheels.

6.4.1 Fitting grinding / cutting discs using the Kwik-Lock clamping nut O

NOTE
The arrow on the upper surface of the nut must be within the index marks. If the arrow is not within the index marks when the nut is tightened, it will be impossible to release the nut by hand. Should it be necessary, the pin wrench can be used to release the Kwik-Lock nut (do not use a pipe wrench!).

1. Disconnect the supply cord plug from the power outlet.
2. Clean the clamping flange and the quick release clamping nut.
3. **CAUTION** The clamping flange is equipped with an O-ring. The O-ring must be replaced if missing or damaged.
   Fit the clamping flange onto the drive spindle.
4. Fit the diamond disc, cutting disc or grinding disc.
5. Screw the quick-release clamping nut onto the spindle until it contacts the disc (the side with the lettering should be visible after the nut is screwed on).
6. **CAUTION** Do not press the spindle lockbutton before the drive spindle has stopped rotating.
   Press the spindle lockbutton and hold it in this position.
7. Turn the grinding disc firmly by hand in a clockwise direction until the quick-release clamping nut is tightened securely.

6.4.2 Removing grinding / cutting discs secured with the Kwik-Lock nut

1. Disconnect the supply cord plug from the power outlet.
2. Release the Kwik-Lock nut by turning the knurled ring in a counterclockwise direction. (Use the pin wrench to release the Kwik-Lock nut if very tight. Do not use a pipe wrench.)

6.5 Rotating the gearing section O

NOTE
To allow the tool to be used safely and without fatigue in all positions (e.g. on / off switch facing upwards), the gearing section can be rotated to one of four positions at 90° intervals.

1. Disconnect the supply cord plug from the power outlet.
2. Clean the tool.
3. Remove the side handle from the tool.
4. Remove the four screws from the gearing section.
5. Rotate the gearing section to the desired position without pulling it away from the tool.
6. Secure the gearing section by inserting and tightening the four screws.
7. Fit the side handle.

7. Operation

NOTE
Test new cutting or grinding discs by allowing them to run at maximum speed for at least 30 seconds.

CAUTION
Slits cut in loadbearing walls of buildings or other structures may influence the statics of the structure, especially when steel reinforcing bars or load-bearing components are cut through. Consult the structural engineer, architect, or person in charge of the building project before beginning the work.

CAUTION
The electric supply voltage must comply with the information given on the type plate on the tool. 230 V tools may also be connected to a 220 V supply.

CAUTION
Ensure that the tool is disconnected from the electric supply.

CAUTION
Always use the side handle with the tool.

CAUTION
Use clamps or a vice to hold the workpiece securely.

CAUTION
Cutting or grinding may cause splintering of the material. Wear eye protection.

CAUTION
Breathing protection must be worn if the tool is used without a dust extraction system for work that creates dust.

CAUTION
Wear ear protectors. Exposure to noise can cause hearing loss.

WARNING
Avoid touching rotating parts. Switch the tool on only after bringing it into position at the workpiece. Touching rotating parts, especially rotating drill bits, discs or blades, etc. may lead to injury.

CAUTION
The disc may become hot during use. Wear protective gloves when changing discs.

CAUTION
Reduce the load on the tool by avoiding tilting the disc in the kerf when cutting. The tool may otherwise stall.

CAUTION
Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.

CAUTION
Keep inflammable materials away from the working area.

7.1 Switching on / off without locking the switch (DEG 500-D or DEG 600-D)

7.1.1 Switching on

1. Plug the supply cord into the power outlet.
2. Slide the on / off switch forward and then press it as far as it will go.

7.1.2 Switching off

1. Release the on / off switch.

7.2 Switching on / off and locking the switch (DEG 600-P)

NOTE
If the tool is unplugged from the electric supply while the on / off switch is locked in the on position and subsequently plugged back into the electric supply, the tool will not restart. The switch lock must be released while the tool is disconnected from the electric supply before the supply cord is again plugged into the power outlet.

7.2.1 Switching on and locking the switch

1. Plug the supply cord into the power outlet.
2. Slide the on / off switch forward slightly (3 mm) and, while pressing it down, slide it further forward until it locks in position.

7.2.2 Switching off after locking the switch

1. Press the front part of the on / off switch down (the lock then releases).

8. Care and maintenance

CAUTION
Disconnect the supply cord plug from the power outlet.

8.1 Care of the tool

NOTE
The outer casing of the tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the tool.

Clean the outside of the tool at regular intervals with a slightly damp cloth.
Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the tool.
Always keep the grip surfaces of the tool free from oil and grease. Do not use cleaning agents which contain silicone.

8.2 Maintenance

NOTE

Do not operate the tool if parts are damaged or when the controls do not function faultlessly. If necessary, your tool should be repaired at a Hilti repair center.

WARNING

Repairs to the electrical section of the tool may be carried out only by trained electrical specialists.

Check all external parts of the tool for damage at regular intervals and check that all controls operate faultlessly.

8.3 Checking the tool after care and maintenance

After carrying out care and maintenance work on the tool, check that all protective and safety devices are fitted and that they function faultlessly.

9. Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't start.	Interruption in the electric supply.	Plug in another electric appliance and check whether it works.
	Supply cord or plug defective.	Have the supply cord and plug checked by an electrical specialist and replaced if necessary.
The tool doesn't achieve full power.	The extension cord's conductor cross section is inadequate.	Use an extension cord with an adequate conductor cross section.

10. Disposal

Most of the materials from which Hilti tools or machines are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old tools for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

11. Warranty

Hilti warrants that the product supplied is free of defects in material and workmanship. This warranty is valid as long as the product is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti operating instructions, all warranty claims are made within 12 months (unless other mandatory national regulations prescribe a longer minimum period) from the date of sale (invoice date) and the technical system is maintained, i.e. only genuine Hilti consumables, accessories and spare parts are used with the product. This warranty provides the free-of-charge repair or replacement of defective parts only. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless mandatory national regulations prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the product for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

Send the product and/or related parts immediately upon discovery of a defect to the local Hilti marketing organization for repair or replacement.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

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